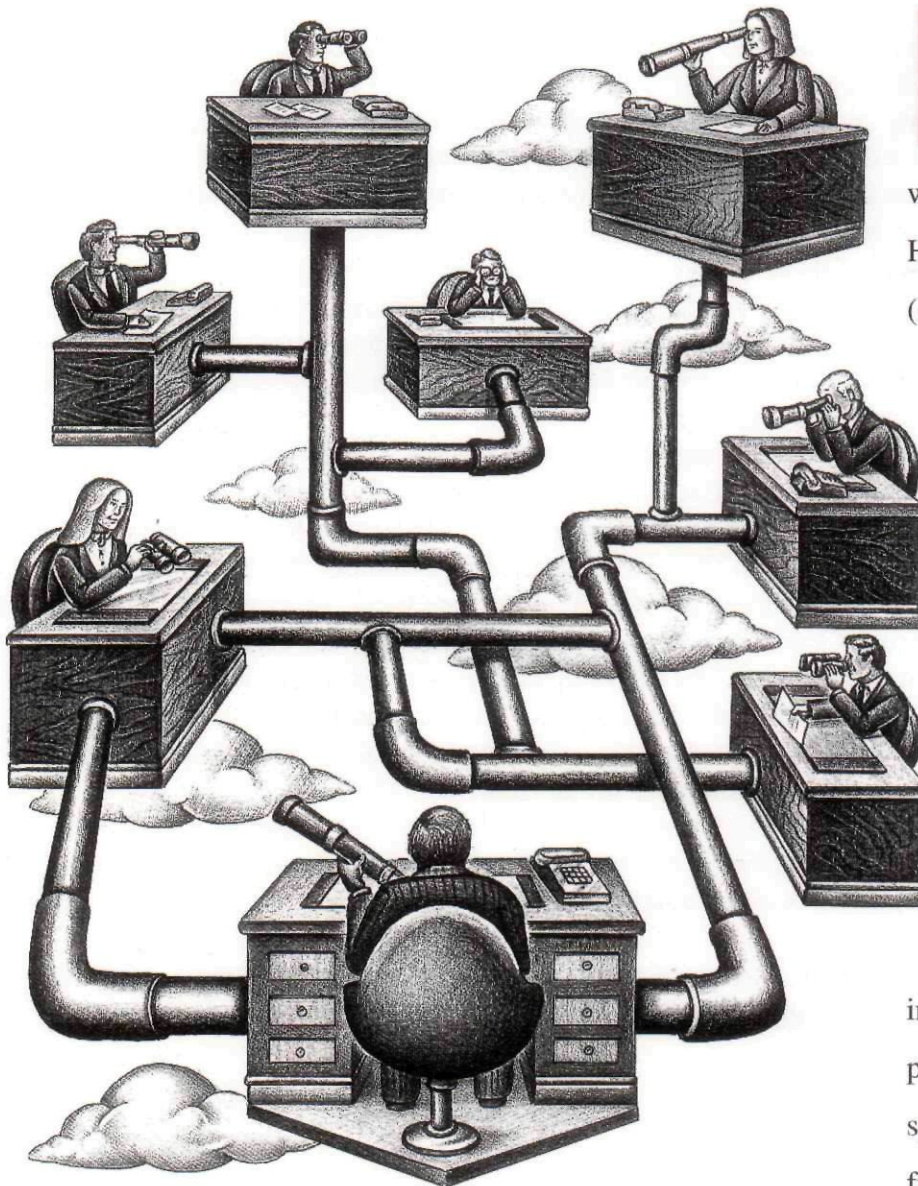


High Performance Work Systems: Exciting Discovery or Passing Fad?

Arup Varma, Institute of Human Resources & Industrial Relations, Loyola University, Chicago; Richard W. Beatty, School of Management & Labor Relations, Rutgers University; Craig E. Schneider, Craig Eric Schneider Associates; David O. Ulrich, University of Michigan



Recently, several organizations reported implementing high performance work systems, with remarkable success. These HPWSs, as they are becoming known (as defined by Nadler, 1989), are primarily aimed at improving the organization's financial and operational performance. A survey of 39 organizations was conducted to examine the antecedents, the design, and the overall effectiveness of these initiatives. Results indicate that HPWSs that create a change in the organization's cultural behavior (e.g., cooperation, innovation) and people management practices (e.g., reward and selection systems) can positively impact the financial and operational performance of these organizations.

Introduction

During the last few years, many organizations have shown an increasing interest in designing and implementing high performance work systems (HPWSs) in order to improve organizational performance and productivity. While HPWS may be the latest buzzword or fad, it is not very clear what defines HPWSs, and how they are designed and implemented. This article reports an empirical study undertaken to investigate how organizations are defining HPWSs and the extent of implementation success.

The primary role of an HPWS is to help the organization achieve a “fit” between information, technology, people, and work (Hanna, 1988; Nadler & Tushman, 1988). In this connection, Huber and Glick (1993) have argued that organization design is the sum total of the organization’s technologies, processes, and structures, and the “fit” is between these categories and the external environment. This fit is considered essential to respond to customer requirements and environmental dictates, thus keeping the organization competitive and financially successful (Tushman and Nadler, 1978; Brown, 1989; Nadler, 1989). In essence, organizations have realized that the four major pieces of organizational architecture (i.e., information, technology, people, and work) need to be highly integrated for maximum efficiency and effectiveness.

Nadler and Gerstein (1992) have characterized an HPWS as a way of thinking about organizations. Thus, instead of trying to fit people (the employees) into the existing technological structure within the organization, HPWSs aim to find the best fit among the four components. This fit leads to optimal utilization of all resources, while the emphasis shifts from internal efficiency and effectiveness to external efficiency and effectiveness, with a constant eye on the customer, and other environmental requirements.

HPWSs are getting to be known by many different names (Neal & Tromley, 1995), such as high-involvement work systems, flexible work systems, high commitment/involvement work systems, etc. However, the basic premise of all these versions remains the same — creating an internal environment that supports customer needs and expectations. This internal environment is typically comprised of two broad

sub-environments — the social and the technical — and it is the optimum fit between the two that is the primary goal of HPWSs. White (1994), for example, characterizes an HPWS workplace as one that “has self-managed teams that design their own work methods, have high levels of training, and share in financial results.” The emphasis is on a horizontal organization with a strong customer orientation. In addition, something common to nearly all HPWS success stories is the renewed examination of work — the establishment of what needs to be done (if at all), and doing it better, faster, and with lower costs.

The literature is replete with examples of success stories (see bibliography HRPS, 1996).

The primary role of an HPWS is to help the organization achieve a “fit” between information, technology, people, and work.

For example, Ramcharandas (1994) discusses the example of Xerox, which has recovered from a downward spiral in the 1980s — when it was beginning to lose market share and seeing earnings steadily decreasing — to a situation in which it has recaptured markets from the Japanese and earnings have been on a steady upward path. This remarkable turnaround was achieved by creating a continuous learning environment and moving from a vertical, control-

oriented hierarchy to a horizontal, empowered organization. In this connection, it has been argued that employee involvement is a key ingredient of high performance organization design (Cotton, 1993; Lawler, 1994; Ledford, 1994).

One of the keys to successful HPWS implementation seems to be the way an organization uses its human resources. In a survey of 700 organizations (U.S. Dept. of Labor, 1993), it was found that firms that used innovative human resource practices show a significantly higher level of shareholder and gross return on capital. Further, among Fortune 1000 companies that empowered their employees by increasing responsibility, a vast majority reported increased productivity and quality. Thus, it is evident that the primary emphasis of HPWSs is on modifying internal processes (i.e., work, information, people, and technical structures) that are aimed at satisfying customer needs and expectations.

A majority of the organizations that have implemented HPWSs reported meeting with remarkable financial and organizational success in their efforts. Specifically, research has established that the use of comprehensive systems of work practices is highly correlated with higher



productivity and stronger financial performance (U.S. Dept. of Labor, 1993). Further, Huselid (1995) reports a strong link between high performance work systems — mostly human resource systems in this instance — and decreased turnover, as well as increased productivity. However, in spite of the significant positive impact of HPWSs, only about 13% of American companies have actually implemented HPWSs (White, 1994), and even then, there is little research on the impact of HPWSs in the service sector.

The Survey

The present study was thus designed to assess the effectiveness of initiatives undertaken to develop what have come to be known as high performance work systems, specifically in services. The focus of our study was on organizations that produce goods and services, but primarily upon the service component in the sense of providing support to those who ultimately deliver the product or service. For purposes of this study, we adapted the definition provided by Nadler and his colleagues (1992). According to this definition, HPWSs are characterized as self-contained work units that have, over time, met the ultimate competitive test of consistently providing significant value to the customer due to the unique structures and processes that provide efficiency and effectiveness.

In order to design and develop a comprehensive questionnaire, we conducted a pilot study using a limited number of firms in New Jersey. Once the survey questionnaire was finalized, we set about identifying organizations that would be contacted with a request to participate in this study. Over 1,500 organizations were contacted. These organizations were identified from several sources, including the annotated bibliography (HRPS, 1996), which was based on an exhaustive literature search. In addition, we contacted nearly all the members of The Human Resource Planning Society ($n = \text{approx. } 1,200$). The survey was sent to the over 1,500 organizations thus identified. The initial mailings were succeeded by a follow-up call to each company, where the relevant individual(s) were contacted with a request to participate in the study by experiencing a rather lengthy telephone interview and forwarding us firm-specific data. Thirty-nine firms met our criteria for service HPWSs and responded to our survey, and our findings are based on the aggregate responses of these firms.

Demographics

The respondent firms had an average (mean) of 18,000 employees, with a range of six (e.g., a small personal services company) to 300,000 (e.g., a telecommunications giant) employees. However, while HPWSs may often be initiated by large firms, it is clear that firms of any size may be involved in such of such initiatives (median = 6,000). In terms of area of business, the firms we surveyed were arrayed in such diverse markets as insurance, telecommunications, food processing, consumer goods, power, and agricultural services, though our emphasis was on the service units of these businesses.

Impetus for HPWS

One of the issues we were interested in investigating was the factors that led to the implementation of HPWS in the organizations surveyed. Most firms reported that the decision was based on a combination of internal and external stimuli. In the case of internal stimuli, HPWS was started mostly as a part of an overall corporate plan often due to a failure to halt declining levels of operational effectiveness. However, a sizable number of firms reported that change in leadership, perhaps due to less than favorable business results, was often the major impetus behind implementing an HPWS. In the case of external stimuli, customers and new competitors were reported as the major factors behind the decision.

In terms of specific expectations from the HPWS initiatives, the organizations surveyed listed improved efficiency and reduced costs as the primary financial outcomes. In addition, several operational outcomes were listed as necessary to achieve the financial outcomes, including customer success/satisfaction, improved speed, improved quality, and improved productivity. Finally, in order to achieve the aforementioned operational outcomes, an increase in the levels of a number of workforce initiatives was cited as essential. The initiatives listed included empowerment, job security, risk-taking, innovation, and teamwork. Thus, it is clear that human resource practices were expected to have a major impact on the operational outcomes of these organizations.

Earlier Attempts to Implement HPWSs

About one-third of the firms surveyed had made earlier attempts to implement HPWSs, and in nearly all these cases, the HPWS initiative was tried in the same unit. About three-fourths of

those that had made earlier attempts to implement an HPWS reported their earlier attempts as successful. These earlier attempts were reported to have taken an average of about four years. At the same time, earlier success did not automatically guarantee success in future attempts to implement HPWSs. For example, Trinova Corporation reported tremendous success in the HPWS initiatives in their Aeroquip Inoac unit (HRPS, forthcoming). However, future attempts at similar initiatives in other units have reported mixed results. This may be attributed to differing circumstances found in the other units, such as the people management processes, the culture, and/or the design of the new initiative.

In connection with previous initiatives, some of the organizations also reported meeting with resistance. The source of this resistance was spread across the organization, though it came primarily from supervisors and middle-level managers. The present initiatives, too, met with some resistance from within the organization. Over half the firms responding to our survey admitted that they had faced some resistance in their current efforts. Overall, the level of resistance to the present effort was slightly higher than the earlier attempts. This resistance was typically manifested through work slowdowns, reluctance to accept proposed changes, and information filtering. In terms of the source of resistance, the earlier pattern was repeated. While the resistance came from all sources, the bulk of it was concentrated in the supervisory and middle management cadres. As such, it is clear that a previous attempt at implementing HPWSs does not make the second effort any easier.

Design of an HPWS

The design of the present HPWS initiatives had several components. Nearly two-thirds of the firms surveyed used some form of external assistance in the design of their HPWSs, mainly in the form of consultants. However, in most cases, the external consultants had little or no role in the implementation of the HPWS, with their primary role concentrating on diagnosing the problem, helping with work design, and conducting training.

In nearly 70% of organizations surveyed, individuals played specific role(s) of the champion or sponsor of this initiative. Of these firms, nearly 90% reported that the champion/sponsor was a member of top management, who took on the role as part of his or her regular work role, and spent

between 25% and 50% of his or her time on this initiative.

Twenty-seven of the 39 firms surveyed reported creating teams as part of the HPWS initiative. Several teams were created, with nearly half the organizations surveyed reporting the creation of more than five teams for this purpose. On the average, the teams had nine members, and were comprised of members from various departments and nearly all levels within the organization, including top management, staff professionals, shop-floor employees, middle management, clerical/support staff, and union members. Eighty-five percent of the firms provided some form of training for the HPWS initiative, with the majority concentrating on training in work design, group problem solving, meeting management, and teamwork. The training was typically an ongoing process, with organizations reporting having provided training at the diagnosis, design, implementation, and evaluation stages.

A detailed project plan typically preceded the initiative, prepared for the most part by a combination of top management, middle management, staff professionals, and consultants. In addition, organizations reported using a variety of tools and techniques in the implementation of the HPWS initiative, such as process redesign, total quality management, communication, team building, group process, and self-managing teams.

Overall, all 39 organizations reported their efforts to be successful, with varying degrees of success. The following sections provide specific findings of the survey, in terms of the culture created by the HPWS, the impact on human resource practices, and the overall impact of the HPWS initiative on the organization's performance. This is followed by a discussion of the implications of these findings for organizations that may be considering designing and/or implementing HPWSs.

Culture Created by the HPWS

Exhibit 1 presents correlations for the individual culture items with two statements measuring the overall impact of HPWS on financial and operational performance of the companies. From this table, it can be seen that a large number of correlations are significant at the conventional level (significance level less than .05). In addition, we can see the magnitude of correlation for each culture item with both financial and operational performance. The magnitude of correlation and

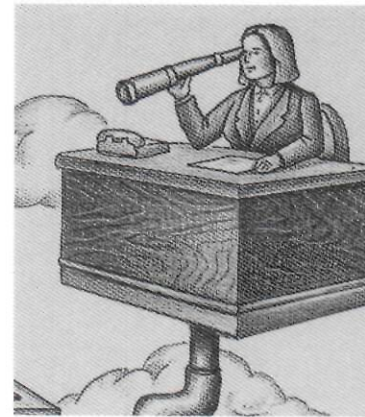


EXHIBIT 1

Culture Created by the HPWS

Practice	Agreement ¹		Financial Performance		Operational Performance	
			R1 ²	S1 ³	R2 ⁴	S2 ⁵
	Mean	S.D.				
Focus on business strategy	4.51	0.77	.47	.00	.11	.51
Used systems design	3.89	1.08	.30	.09	.41	.02
Encouraged innovation	4.08	0.76	.30	.09	.29	.09
Measured internal customer service	3.17	1.23	.12	.52	.51	.00
Measured external customer service	3.59	1.28	.08	.64	.39	.02
Promoted cooperation	4.32	0.71	.60	.00	.42	.01
Changed value system of unit	3.97	0.94	.56	.00	.60	.00
Resulted in high trust levels	3.78	0.87	.46	.01	.63	.00
Innovation made part of employee behavior	3.39	0.96	.37	.03	.61	.00
Focused leader behavior on employee and business needs	3.86	0.82	.46	.01	.58	.00
Resulted in increased delegation	3.38	0.89	.23	.19	.46	.01
Resulted in higher workplace safety	3.09	1.34	.30	.09	.37	.03

1 Mean rating and standard deviation by survey respondents to each statement with a scale ranging from 1 = complete disagreement to 5 = complete agreement

2 Correlation of agreement rating with a statement measuring overall impact of HPWS on the financial performance of the organization

3 Statistical Significance

4 Correlation of agreement rating with a statement measuring overall impact of HPWS on the operational performance of the organization

5 Statistical Significance

the way the item correlates with financial and operational performance provides useful information from a practical perspective. It tells us the relative importance of each of these items to both types of performance.

Based on this criterion, we can see that a number of organizational culture practices are critical for both financial and operational performance (e.g., cooperation and trust), while some practices are significantly related to financial (e.g., business strategy) or operational performance (e.g., increased delegation) but not to both types of performance. A closer look at each of these practices can help explain their potential role in organizational performance levels.

Exhibit 2 presents the list of organizational culture practices that are deemed critical for achieving operational and/or financial success. Overall, it is clear that the data presented here suggest that changing the culture of the organization can be an effective way to improve financial

and operational performance. Specifically, a focus on business strategy seems to have a strong relationship with financial performance of the organization, but not with operational performance. This finding confirms the notion that organizational business plans are typically geared toward improving the bottom line, but often fail to be concerned with operational details: "We need to get from here to there, but we don't care how."

EXHIBIT 2

Effective Organizational Culture Practices

✓ = significant positive relationship

Practice	Financial Performance	Operational Performance
Focus on business strategy	✓	
Used systems design		✓
Measured internal customer service		✓
Measured external customer service		✓
Resulted in increased delegation		✓
Resulted in higher workplace safety		✓
Promoted cooperation	✓	✓
Changed value system of unit	✓	✓
Resulted in high trust levels	✓	✓
Innovation made part of employee behavior	✓	✓
Focused leader behavior on employee and business needs	✓	✓

On the other hand, using a system design in “the way the work is done” has a strong relationship with the operational performance of the organization. Given that operational performance is defined, in part, by the quality and speed at which work is done, this is an important finding. Next, emphasis on customer service (both internal and external) again has a positive effect on the operational performance of the organization. Thus, emphasizing the company’s commitment to customer orientation can lead to significant improvements in the quality of service provided.

Not surprisingly, increased delegation has a significant positive relationship with operational outcomes. Once again, this confirms the notion that employees feel empowered by increased delegation, and this empowerment can lead to significant improvements in the operational outcomes of the organization. This is an important finding worthy of attention. The data suggest that organizations that make a conscious effort to increase delegation of work are likely to benefit by improving their operational outcomes. As an example, Trinova Corporation (HRPS, forthcoming) allowed employees, in the final assembly area of their Aeroquip Inoac unit, to make changes in their work area layout and processes, resulting in significant improvements in productivity and quality. Buoyed by the initial success, management allowed employees to continue exploring ways to improve the processes and layout in their work area. This resulted in several iterations involving significant changes, resulting in improved quality and increased productivity each time.

Thus, it is clear that when employees are given more responsibility (through increased delegation), they feel empowered. This feeling of empowerment leads them to identify and suggest changes in the work place (e.g., modifying processes) that could lead to improved operational performance (e.g., speed, quality of work, etc.). Exhibit 3

presents a model of the impact of delegation on operational performance.

The final cultural practice that has a significant relationship with operational performance (but not financial performance) is workplace safety, and our data suggest that improvement in safety levels can result in improved operations.

The third set of cultural practices have significantly strong relationships with both financial and operational outcomes. This means that these practices may help organizations improve both financial and operational performance. The first practice listed in this category is the notion of cooperation. Clearly, an improvement in the levels of cooperation between all employees will lead to improvements in the way that work is done (operational outcomes), but, more important, this also has a strong impact on financial outcomes. While the impact of cooperation on financial outcomes may not seem obvious, it should be noted that these two are highly correlated — thus, an improvement in one is accompanied by an improvement in the other. A positive change in the value system of the business unit and higher trust levels are also associated with positive changes in both types of organizational performance. Similarly, making innovation a normal part of employee behavior can lead to improvements in financial and operational performance. Finally, focusing the supervisor’s behavior on business and employee needs can help the organization grow tremendously. Too often, supervisors concern themselves too deeply with business needs, ignoring employee needs. This can have a negative impact on their performance, which could negatively impact organizational performance. Our findings suggest that supervisors should pay close attention to both business and employee needs to achieve improved performance for the organization.



EXHIBIT 3

A Model of the Impact of Delegation on Operational Performance



EXHIBIT 4

People Management Processes (PMP) Created by the HPWS

PMP Practice	Agreement ¹		Financial Performance		Operational Performance	
	Mean	S.D.	R1 ²	S1 ³	R2 ⁴	S2 ⁵
Rewarded internal customer service	3.31	1.13	.31	.08	.54	.00
Rewarded external customer service	3.62	1.16	.24	.19	.45	.01
Used team-based rewards	3.29	1.19	.37	.03	.49	.00
Used individually based rewards	2.91	1.24	.14	.43	.19	.28
Used financial rewards	3.06	1.32	.25	.17	.28	.11
Used non-financial rewards	3.29	1.14	.42	.02	.51	.00
Compensated competency growth	2.70	1.36	.52	.00	.63	.00
Helped internal/external recruitment	2.59	1.35	.10	.59	.33	.06
Used rigorous selection process	3.12	1.24	.30	.10	.52	.00
Used multiple selection mechanisms	3.06	1.34	.30	.10	.51	.00
Trained selectors	2.85	1.42	.29	.11	.42	.02
Supervisors held responsible for employee development	3.09	1.25	.16	.37	.00	.99
Rewarded employee learning	3.27	1.15	.46	.01	.59	.00
Tracked competency growth of employees	2.19	1.19	.26	.14	.37	.03
Set performance improvement targets for employees	3.34	1.08	.18	.32	.27	.12

1 Mean rating and standard deviation by survey respondents to each statement with a scale ranging from 1 = complete disagreement to 5 = complete agreement

2 Correlation of agreement rating with a statement measuring overall impact of HPWS on the financial performance of the organization

3 Statistical Significance

4 Correlation of agreement rating with a statement measuring overall impact of HPWS on the operational performance of the organization

5 Statistical Significance

Human Resource Practices

Since one of the keys to a successful HPWS is the optimal and proper utilization of human resources, we were very interested in investigating the impact of the HPWS initiative on the people management processes (HR practices) of the firms surveyed. Exhibit 4 presents means and standard deviations for items relating to the people management processes created by the HPWS. In addition, like Exhibit 1, Exhibit 4 presents correlations for the people management processes created by the HPWS with the two items measuring financial and operational performance.

Survey results in Exhibit 4 indicate that using team-based and non-financial rewards is closely related to improved financial and operational performance. Similarly, compensating employees for improving their competencies and rewarding them for learning also leads to improved performance on both counts.

On the other hand, rewarding internal and external customer service can lead to improved

operational performance, though not financial performance. This mirrors the results found in connection with organizational culture practices.

Increased attention paid to the selection process (e.g., multiple selectors, training selectors, etc.) revealed a similar pattern of results. In this connection, Trinova Corporation (HRPS, forthcoming) reports adopting a very unique selection system whereby prospective employees are hired through a temporary employment agency for a 60-day trial period in order to better acquaint themselves with the job requirements. At the end of this trial period, current employees are allowed a chance to provide peer reviews to the prospective employee, and problems faced by the employee or the organization during this period are discussed openly. The prospective employee is then allowed another trial period of 30 days, at the end of which discussions on regular employment are conducted. Employees who pass the trial period are offered regular employment, while those who do not are referred back to the temporary agency.

It may be a result of this unique system that absenteeism in this unit is about 1.5% and turnover is about 3%, both well below the industry average.

Finally, tracking the competency growth of employees has a strong relationship with operational performance but not with financial performance. This finding merits some discussion. As organizations track employee competency growth, the increased attention paid to the employees could lead to conscious efforts on the part of employees to "grow their competencies." It seems obvious that this improvement in employee competency would then result in improved operational performance (Beatty, Dimitroff, & O'Neill, 1995).

EXHIBIT 5

Effective Organizational Culture Practices

✓ = significant positive relationship

Practice	Financial Performance	Operational Performance
Rewarded internal customer service		✓
Rewarded external customer service		✓
Used rigorous selection process		✓
Used multiple selection mechanisms		✓
Trained selectors		✓
Tracked competency growth of employees		✓
Used team-based rewards	✓	✓
Used non-financial rewards	✓	✓
Compensated competency growth	✓	✓
Rewarded employee learning	✓	✓

The data presented here suggest that organizations can improve both financial and operational performance by revisiting their human resource practices. Thus, managers and organizations would do well to pay close attention to HR practices and the impact they may have on operational and financial performance. In Exhibit 5, we present a list of HR practices that seem to go hand in hand with operational and/or financial performance.

Overall Impact of HPWSs

An important finding in this survey was the significant improvement in the competitive advantage position of the organization/unit subsequent to the implementation of the HPWS. In most cases the organization was fairly competitive prior to the HPWS ($m = 2.81$, $s.d. = 0.93$); however, this position improved significantly ($m = 4.07$, $s.d. = 0.70$) after the HPWS. Thus, it seems that HPWSs are primarily initiated by strong firms that are seeking to become stronger. While it was clear that organizations participating in our survey reported that the HPWSs in their organizations made them stronger and more competitive, we were interested in identifying specific areas of the business where the HPWS had a significant impact. Accordingly, the final section of our survey (titled "Impact of HPWS") contained questions on several key areas of business, including financial and operational performance, job satisfaction, communication processes, and work design.

Exhibit 6 presents the means and standard deviations for all of these items. In addition, we also present the intercorrelations among all these items; this helps to understand the degree to which these areas go hand in hand. The data presented report several key findings. First and foremost, firms reported that HPWS had a significant impact on the financial performance of the organization. Thus, as expected, HPWSs did successfully impact the bottom line in a positive direction. In addition, the operational performance of these organizations was also significantly influenced by the HPWS, in a positive direction. As such, the quality of work, the speed at which work is done, productivity, and customer satisfaction also improved significantly.

Next, the HPWS effort caused a positive culture change in the organization. Employees also reported significantly higher levels of job satisfaction and that communication processes within the organizations improved markedly. Finally, the HPWS positively influenced the way work is designed within the organization/unit, often reflected in the move from a hierarchical structure to a flatter, more horizontal, organization.

Further analysis of the data presented in Exhibit 6 reveals several additional important findings. Job satisfaction, for example, is significantly related to both financial and operational performance and all other processes influenced



EXHIBIT 6

Overall Impact of HPWS - Table of Intercorrelations

	Mean	S.D.	I1	I2	I3	I4	I5	I6	I7	I8	I9
I1	3.66	0.97	--								
I2	3.94	0.83	.39 (.02)	--							
I3	2.06	1.57	.28 (.10)	.09 (.60)	--						
I4	2.60	1.42	-.10 (.56)	-.04 (.84)	-.46 (.01)	--					
I5	3.67	0.78	.68 (.00)	.67 (.00)	.34 (.05)	-.11 (.54)	--				
I6	3.89	0.75	.53 (.00)	.50 (.00)	.46 (.01)	-.09 (.61)	.63 (.00)	--			
I7	3.67	1.20	.53 (.00)	.68 (.00)	.26 (.14)	.08 (.65)	.63 (.00)	.57 (.00)	--		
I8	3.86	0.87	.63 (.00)	.56 (.00)	.07 (.71)	-.06 (.72)	.68 (.00)	.42 (.01)	.45 (.01)	--	
I9	3.91	1.09	.36 (.04)	.54 (.00)	.26 (.15)	-.05 (.78)	.70 (.00)	.48 (.00)	.54 (.00)	.58 (.00)	--

I1 = Influenced financial performance; I2 = Caused culture change; I3 = Led to increase in total number of employees

I4 = Led to decrease in total number of employees; I5 = Influenced operational performance; I6 = Influenced job satisfaction

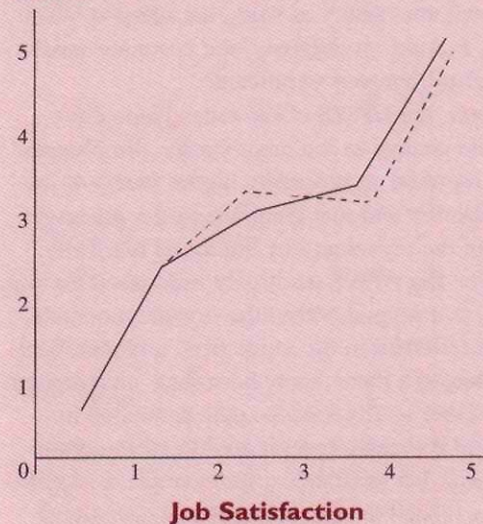
I7 = Influenced hierarchy/structure; I8 = Influenced communication processes; I9 = Influenced work design

Note: Statistical significance levels are in parentheses

EXHIBIT 7

The Impact of Employee Job Satisfaction on Financial and Operational Performance

Performance Levels



Note: ----- Financial Performance
 ————— Operational Performance

by the HPWS, except decrease in total number of employees in the organizations. Regression analyses (conducted to estimate the causal impact of satisfaction on performance) revealed that job satisfaction had a significant positive impact on both financial performance ($F = 8.98, p < .01$) and operational performance ($F = 8.23, p < .01$) of the organizations. Thus, managers would do well to identify cultural and HR practices that might help improve employee job satisfaction, since higher levels of job satisfaction could lead to improved financial and operational performance for the company (see Exhibit 7).

We noted earlier that a reduction in workforce size has a negative (or insignificant) correlation with all other organizational processes (see Exhibit 6). Thus, any decrease in the number of employees with a view to improving organizational performance could lead to the opposite effect — that is, a decline in financial and operational performance. The good news here is that a significant increase or decrease in the number of employees was not reported by organizations participating in our survey ($m = 2.06$ and 2.60 , respectively). This is an important finding given that employees are often concerned that initiatives such as HPWSs are really aimed at a reduction in workforce.

Conclusions

This survey was conducted with a view to studying the effectiveness of HPWSs within organizations. It was designed to answer some important questions: What kinds of organizations are implementing HPWSs? What changes in organizational culture and human resource practices occur as a part of the HPWS process? What is the impact of HPWSs on the financial and operational performance of these organizations?

It is clear from the above findings that HPWSs are an effective mechanism to change the way work is done within organizations. Specifically for the service sector, the emphasis on customer satisfaction and financial/operational success can be fulfilled by implementing properly designed initiatives with involvement and commitment from all corners of the organization and/or the unit in which the effort is implemented. These data can be used by organizations as a guide to the nuts and bolts of designing and implementing a successful HPWS.

However, some caution is required before organizations rush to design and implement HPWSs. For example, one of the key questions often asked is, What human resource practices are essential for a high performance workplace? As Gephart (1995) notes, research has not clearly identified any single set of such practices. Organizations have tried a number of approaches to create a high performance workplace, with varying degrees of success. However, as she points out, "effectively managing people is a key to all the mechanisms" that organizations may employ to achieve high performance.

On this issue, the data presented here provide some suggestions. For example, team-based rewards need to be implemented to go hand in hand with the need for teams. It is also clear from

our results that a majority of the organizations believe that teams do work and are most often an integral part of the HPWS process. As an example, MetP&C (HRPS, forthcoming) attributed its successful implementation of an HPWS to the fact that a team was established for this purpose, and that this team included members from all over the organization in terms of function and level. The company suggested that the cross-functional nature of the team allowed for easier flow of relevant information, while also resulting in a better understanding of the nature of work done in each function/unit, thus creating cohesiveness and mutual cooperation.

However, further analyses of our data revealed that there were no significant differences (see Exhibit 8) in terms of financial and operational success between organizations that had formed teams for the purpose of an HPWS, and those that had not. This is an interesting finding, and worth some discussion. If having teams take on the responsibility of implementing the HPWS initiative does not significantly add to the possibility of success, are teams really needed for this purpose? Where teams are formed, members are often required to devote a majority of their time toward the team goal, which in effect takes them away from their regular assignments. In addition, for teams to be successful, team-based rewards need to be developed and implemented. However, if the same level of outcomes can be achieved without the formation of teams (as our results suggest), maybe organizations would do well to critically examine whether the formation of teams is necessary.

The data further suggest that customer service (both external and internal) needs to be rewarded, and other similar desirable behaviors reinforced through appropriate measures. As an example, the secretary in the Executive Vice President's office at Continental General Tire saved the company just under \$100 by ordering donuts for one of their meetings from an outside vendor instead of the office cafeteria (HRPS, forthcoming). Clearly, this is a small amount for a company with North American sales of over \$1 billion. But this act of cost savings on the part of the secretary did not go unnoticed; she was cited for a reward and honored appropriately. Company executives believe rewarding customer service leads to a sense of ownership, which in turn results in better performance overall.

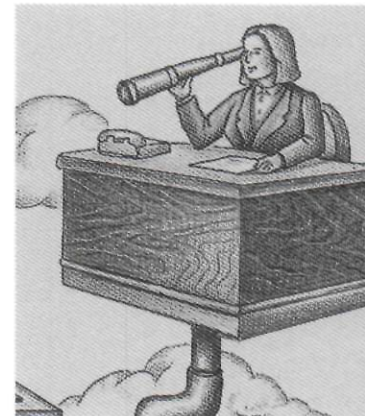


EXHIBIT 8

The Impact of Teams on Organizational Performance

Outcomes	Group I Teams (N = 27)		Group II No Teams (N = 12)	
	Mean	S.D.	Mean	S.D.
Financial Performance	3.72	.86	3.50	.50
Operational Performance	3.71	.99	3.63	.74

Note: t-tests for comparison of means revealed that these means are not significantly different from each other.

Finally, attention needs to be paid to the area of performance management, as this seems to play an important role in the success of the HPWS initiative. For example, Popular Products (HRPS, forthcoming) has established a cascading three-step performance management system. The first stage involves establishing the long-term objectives of the company based on the strategic plan. The next step involves devising the current year's business plan in order to meet the long-term objectives. Finally, a performance plan is developed for each employee, so it is clear what he or she needs to do during the year to meet the company's objectives. According to executives at Popular, it is this link between the company's strategic goals and individual performance goals that enables employees to understand the impact of their performance on the success or failure of the company.

In essence, it is clear that the better the fit between people and work, information, and technology, the higher the likelihood of a successful HPWS. Clearly, HPWSs do focus on "the way the work is done" through creating flexible work organizations that adapt the people and the technical systems to each other, rather than trying to fit the people to the technical system. As Harrington (1991) points out, attention in the process is one of the key ingredients to a successful HPWS.

EXHIBIT 9

The Impact of External Assistance on Organizational Performance

Outcomes	Group I External Assistance (N = 24)		Group II No External Assistance (N = 15)	
	Mean	S.D.	Mean	S.D.
Financial Performance	3.75	.85	3.73	.78
Operational Performance	3.63	.79	3.53	1.13

Note: t-tests for comparison of means revealed that these means are not significantly different from each other.

Further, HPWSs need to be very focused and clearly linked to the business strategy, and the proposed steps need to be clearly laid out. Lifecycle and other strategic choices need to be made prior to the initiation of the effort. Benchmarking may not be very essential to the effort, as most successful organizations reported successfully "inventing the process." Further, external assistance does not seem to be a major

requirement for the success of this initiative. While many of the firms surveyed reported using external assistance, there were no significant differences in the outcomes between firms that utilized external assistance and those that did not (see Exhibit 9).

Training, however, is a key ingredient in this process, and all the individuals involved with the HPWS initiative need to be provided with ongoing training. While some of the training might need to be provided prior to initiating the effort, the most successful organizations report ongoing training in areas such as problem solving, time/ meeting management, communication, and process redesign.

Overall, it is clear that token changes will not result in creation of the desired high performance workplace. Thus, for example, implementing a team structure without explicitly establishing team-based rewards will not result in a high performing workplace. As such, organizations need to completely overhaul "the way work is done" in order to create a high performance workplace, so that the results are real and tangible. Further, as Huselid (1995) argues, organizations using a combination of high performance work practices will perform better than those that deal with it on a piecemeal basis.

If organizations design and implement HPWSs with our findings and recommendations in mind, the likelihood of creating a high performance workplace would seem to be very high. The benefits of HPWSs are many. Organizational culture and value systems can be changed for the better, and higher levels of cooperation and improved communication are direct results. In addition, substantial positive improvements in financial and operational outcomes can be achieved. However, since the whole process is dependent on the commitment and involvement of the people in the organization, the key is to successfully manage the people within the organization through open communication and participation.

Finally, a note of caution: organizations need to be aware that HPWS initiatives are likely to meet with resistance and that this resistance could come from any level within the organization. But, as our survey shows, this resistance is not detrimental to the effort, since all organizations reported high levels of success in their efforts. Based on our findings, it is suggested that clear communication and high employee involvement may reduce the resistance substantially and lead to a successful HPWS.

Biographical Sketches

Arup Varma, Ph.D., (Rutgers University - 1996) is Associate Professor at the Institute of Human Resources and Industrial Relations at Loyola University-Chicago. His research interests include the examination of cognitive processes in performance appraisals, leader-member exchange, the treatment of individuals with disabilities in the workplace, and high performance work systems. His research has been published in leading journals including *Personnel Psychology*, *Journal of Applied Psychology*, *Human Resource Management Review*, and *Human Resource Planning*. He has also consulted with several organizations on strategic and organization development issues. Prior to returning to graduate school for his doctorate, he worked for two of India's leading corporations in the human resource field.

Richard W. Beatty, Ph.D., is a Core Faculty member at the University of Michigan's Executive Education Center. He serves as faculty member and course developer for the certification program of the American Compensation Association. As a management consultant, he has worked with well over half of the Fortune 100 firms. His specialty is working with organizations to design and implement strategic change initiatives. Dr. Beatty has authored (or coauthored) more than 120 articles and papers and written and edited several books. He is an Associate Editor of *Human Resource Management* and has served on the editorial boards of the *Academy of Management Journal*, *Human Resource Planning*, and *The Journal of High Technology Management*.

Craig E. Schneider, Ph.D., heads his own management consulting firm in Princeton, NJ. The firm specializes in assisting organizations execute strategy and change culture, as well as enhance the effectiveness of the HR systems. Dr. Schneider has held consulting positions with Ernst and Young, Booz-Allen, ODI, and Sibson. He has been on the faculty of the University of Maryland, University of Colorado, and Columbia University. Dr. Schneider has been co-author or co-editor of over 100 articles and several books, including *Managing Strategic and Cultural Change*. He has consulted with over half of the Fortune 100 companies.

David O. Ulrich, Ph.D., is Professor of Business Administration and Co-Director of Human Resource Programs at the University of Michigan. He is also editor of the *Human Resource Management Journal*, and has published more than 50 publications on strategy implementation,

organizational theory, competitiveness, leadership, and human resources. He is cocauthor of *Organizational Capability: Competing From the Inside Out*, *The Boundaryless Organization*, and his most recent book is *Human Resource Champions*. He has continued interest in integrating academic research and organizational practice, and has done research for and consulted with over half of the Fortune 200.

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